

## Chapter 1 The Science of Biology

## Section Review 1-4

### Reviewing Key Concepts

**Short Answer** *On the lines provided, answer the following questions.*

1. What system of measurement is universal among scientists?

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2. What are the two main types of electron microscopes?

\_\_\_\_\_

**Identification** *On the lines provided, identify each description as light microscope, electron microscope, or both.*

- |       |  |
|-------|--|
| _____ | 3. can be used to view living samples                                |
| _____ | 4. can be equipped to produce real-time images of movements of cells |
| _____ | 5. used to view dead and preserved cells                             |
| _____ | 6. can produce 3-D images of the surfaces of objects                 |

### Reviewing Key Skills

7. **Inferring** If a scientist wanted to study cell responses under varying environmental conditions, what laboratory technique would be appropriate to use? Explain your answer.

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\_\_\_\_\_

8. **Evaluating** If each scientist used a different system of measurement and invented his or her own tools of measurement, what problems might arise?

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\_\_\_\_\_

9. **Comparing and Contrasting** Cell fractionation and light microscopy can be used to study various organelles. What types of information could each technique provide?

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10. **Calculating** Which value is greater, 10,000 centimeters or 1 kilometer? Explain your answer.

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